AMENDMENTS TO THE SPECIFICATION

On page 2, line 2, the following replacement paragraph is presented for amendment with the changes as marked:

Microcantilevers can have the shape of a simple beam extending from a larger support member, or they can have a more complex shape. Many AFM microcantilevers have a two-beam geometry and form a V-shape with the apex at the distal end where a probe tip is mounted. Another geometry of AFM microcantilevers comprises a diffraction grating, where more than one microcantilever has finer finger elements that are interleaved with fingers of another microcantilever to form an optical grating structure.

On page 12, line 2, the following replacement paragraph is presented for amendment with the changes as marked:

Figures 4A and 4B illustrate two combinations of microprobes and wedges having various dimensions selected based on a ~~the~~ measured amount of stress-induced deflection of the corresponding microprobe;

On page 15, line 4, the following replacement paragraph is presented for amendment with the changes as marked:

Referring more particularly to Figure 2, the principles of the stress compensation according to the present invention are~~nd~~ shown. Again, it is difficult to control stress in the fabrication of the microprobe 10. Piezoelectric layer 26 may exert significant surface stress on microcantilever portion 18, bending it along the length of the microcantilever out of the plane of substrate 16 by several degrees. This unwanted stress is sufficient to deflect the microcantilever 18 out of the sensitive range of the deflection detector 35 as shown with the dashed line 38 in Figure 2. More particularly, a laser beam 34 emitted by a laser diode 36 is reflected from the underside of the microcantilever 12. The sweep of such reflection 38 ideally is detected by a deflection detector 35, but the static deflection of the cantilever renders the reflected beam 38 undetectable without repositioning the deflection detection apparatus, an~~d~~ unwanted and sometimes completely impractical task. As the reflected beam 38 sweeps back and forth across the detector 35, it produces a signal having a frequency proportional to the oscillation frequency of the microcantilever 12 (in an oscillating mode, for instance), and a magnitude proportional to the extent of microcantilever bending. By selecting a wedge 28 with an appropriate angle θ, the reflected beam is re-directed along a path marked 38 so that it may be detected by sensor 35.

On page 16, line 23 to page 17, line 4, the following replacement paragraph is presented for amendment with the changes as marked:

In Figure 4B, where a microcantilever portion 72 of a microprobe 70 is deflected a greater amount than microcantilever 52 by a film 74 disposed thereon, a different compensation piece is required. In this case, a height h_2 and an angle θ_2 are chosen to again position a distal end 78 of probe 70 so that it properly reflects the laser light within the range of the deflection detection system (33 in Figure 2, for example). In particular, because microcantilever portion 72 is bent downwardly further than portion 52 in Figure 4A (in this case, away from the sample, not shown) θ_2 is greater than~~t~~ θ_1. After selecting the appropriate wedge 76, a substrate 81 of probe 80 is coupled to sloped surface 82 of wedge 76, while a base 84 of wedge 76 is coupled to a mount (not shown). As a result, the distal end 78 will reflect the light within the range of the detector during an AFM scanning operation.